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May 19, 2004

Alice Lind
Washington Dept. of Social & Health Services
Medical Assistance Administration
P.O. Box 45530
Olympia, WA 98504-5530

Re: Actuarial Soundness of COPD Disease Management Rates

Dear Alice:

At your request, we have completed our analysis of the actuarial soundness of the chronic obstructive pulmonary disease (COPD) disease management rates. We have determined that the rates paid to McKesson for COPD are within a range of rates that we would deem to be actuarially sound.

The table below summarizes our results. Please refer to the methodology section for more detail on the expected capitation amounts. Detail models are included as appendices.

	Study Per Member Monthly Rate Range		Contractual Per Member Monthly Capitation		Expected Average Capitation
	Low	High	Low	High	
COPD	$0.62	$1.43	$0.67	$0.92	$0.85

This analysis is intended for the use of the Washington State Department of Social and Health Services, Medical Assistance Administration as documentation of the actuarial soundness of disease management rates for CMS. It should not be relied upon by any other party or for any other purpose without written permission from Milliman USA.

Actuarial Certification Checklist

We have reviewed the CMS Financial Review Documentation for At-risk Capitated Contracts Ratesetting. Due to the nature of disease management, many of the items for review in the checklist do not apply to these rates. We have addressed the items we felt were applicable in the documentation provided below.

Background

a) Target Population

The COPD program targets the same population of Medicaid members as the other five DM programs in Washington. The primary aid categories being served are Categorically Needy members that qualify as Aged, Blind, Disabled and TANF that are fee-for-service. There are no dually eligible members in the population.

b) Services Provided

The COPD program essentially offers the following member services:

1. Enrollment – Members are identified using claims data, and proactively enrolled in the program. They are allowed to opt out at any time by contacting the state or the DM vendor. Members are encouraged to call in and become an active participant in the program, and are also proactively contacted and asked to become active participants.

2. Assessment – A McKesson professional calls the member, introduces them to the program, and invites them to participate. Trained registered nurses conduct a comprehensive telephonic assessment to determine the member's risk profile. Assessments are conducted at enrollment and semi-annually. The assessment includes:

    - Health care utilization
    - Functional, medical, and psychosocial status
    - Risk factors for the specific conditions
    - Self-management and health maintenance practices

3. Intervention -- McKesson provides a customized self-management plan for all members. Further education, counseling, monitoring, and behavior change interventions vary based on the member's risk profile and individualized need. The Registered Nurse may provide the following types of education:

    - Proactive telephone education, discussion, and support during scheduled phone calls
    - Educational mailings of pamphlets and/or workbooks
    - Alerts and follow-up communications to physicians or case managers based on clinical criteria
    - Referral to local support services provided by DSHS
    - Reinforce availability of *CareEnhance Nurse Advice* line (24-hour symptom based triage program) when symptoms arise
    - In-person visits to perform the assessment and education for high-risk, difficult to reach individuals

4. Physician reporting -- The member's physician receives a report following the initial assessment, the six-month assessment, and the 12-month assessment. The report summarizes

information supplied by the member and the corresponding education, counseling, and behavior change interventions recommended. McKesson encourages physicians to call McKesson with questions or specific member instructions. The physician's office is called to follow-up on high-risk alerts.

We have structured our model for these services in order to make use of the most current data McKesson is able to provide. The analysis presented December 10, 2003 was based on actual experience data for the State of Washington. Since COPD is a new program there is no actual experience to rely on. We have relied on assumptions made by McKesson, based on other Washington DM programs and COPD experience in other populations to project expected costs.

While many other functions are required to administer a DM program, such as data analysis and physician oversight of case management efforts, these are indirect costs that are included in the cost-per-service for those services directly provided to the member. Included in the information provided by McKesson were the actual costs over the past year to administer the asthma, CHF, and diabetes programs. Costs were provided for the following categories: variable nurse costs, educational materials, variable telephone costs, provider outreach, and fixed support costs. We then allocated these actual costs to the member services. If purchased on a fee-for-service basis, we anticipate that these direct services would be all that generate payments for the contractor. We have used this same methodology in developing COPD DM costs.

A similar situation exists in the provision of health care. For example, consider a routine visit to a physician's office. The actual physician visit may be the only service that generates a payment, yet a significant number of indirect costs exist such as nurse support, office expenses, and claim processing staff.

c) Costs of Services

These cost estimates were developed using data provided by McKesson, specifically actual experience for disease management programs with this population. Note that we do not have any actual experience for COPD, we therefore have had to make use of actual costs from other diseases and estimates provided by McKesson.

d) Methodology and Assumptions

We used to the extent possible the same methods to analyze COPD rates as was used to review the other diseases managed by McKesson. The primary difference is that for the diseases which McKesson has been managing there is some actual experience data available.

We analyzed what would cause the cost to vary for the vendor. We determined that the primary driver that would cause the cost to the vendor to vary significantly is the prevalence of COPD. If the prevalence of a disease rose dramatically, this would require significantly more services from the vendor. McKesson and MAA, recognizing this, have built some flexibility into the rate structure. Capitation payments vary depending on the prevalence of the disease in the eligible population.

The table below illustrates the rate structure.

	Bid Rate	Initial Prevalence	Corridor in Which Rate is Valid
COPD	$0.85	2.05%	1.91% - 2.19%

If the prevalence is outside of the valid range, the rate is calculated as the reciprocal proportion of the missed estimate multiplied by 0.8. For example, assume the bid prevalence is 5% and the bid rate PMPM is $1. If actual prevalence is 4% (a 20% reduction), the PMPM rate reduces by 80% of 20%, or 16%, to $0.84. If prevalence is 10% (a 100% increase), the PMPM rate changes by 80% of 100%, or 80%, to $1.80. Because actual prevalence rates exceed initial prevalence assumptions in the bid, the calculated expected capitation payment does not equal the initial bid rate.

In order to build our rate corridor for the McKesson disease groups, we followed the steps outlined below.

1) We received data from McKesson summarizing costs and number of services for the first twelve months in which the initial (asthma, diabetes, and CHF) disease management programs were running. It should be noted that McKesson does not, in general, make it a practice to assign dollar values to each service they perform. They are aware of overall costs to run their program and they do track contacts made and the time of each contact. Using information they had available, they were able to produce data from the first twelve months of the program and estimate the cost of services based on the aggregate expenditures. The use of this data in our analysis of other DM rates is documented in the letter dated December 10, 2003.

2) Since we have no actual experience for COPD at this time, McKesson modeled what they expect utilization and costs to be based on the other Washington programs, specifically diabetes. McKesson believes that on a per diseased member basis the intensity and frequency of services for COPD members most resembles that of the diabetes population. McKesson therefore used actual data from the diabetes population adjusted for prevalence to model COPD services and costs. In addition adjustments were made to the assumed number of minutes for particular services based on experience with other COPD members managed by McKesson.

3) In our analysis of asthma, diabetes and CHF, we found that certain costs had to be allocated among diseases in a more consistent manner. McKesson attempted to allocate total costs for all three programs to each individual program. We revised this allocation as follows:

- Fixed Cost/Support – It is our assumption that there is a minimum initial fixed cost to run a DM program as well as variable costs that depend on the frequency and intensity of services. We assumed that of the total actual fixed cost/support dollars, $150,000 should be allocated to each program as a minimum program cost. The remaining dollars were then allocated based on the number of telephonic contact minutes by disease (excluding failed/incomplete contacts). The average fixed cost/support cost per telephonic contact minute was approximately $1.823. Based on this formula if a disease program had 100,000 telephonic contact minutes the total fixed/support costs would be $332,300 ($150,000 + $1.823 x 100,000). Previously, there was no loss of fixed cost/support dollars, only a redistribution. This was important as we were dealing with actual experience dollars in aggregate. COPD fixed cost/support dollars were estimated, and therefore we decided that there was no compelling reason to deviate from the formula developed for the other disease programs. The results (as shown in Exhibit 2) of application of this formula for the COPD program is a total fixed cost/support cost of $472,583 ($150,000 + 176,951.7 minutes x $1.823). This figure represents a decrease of $94,897 from the projection provided by McKesson.

- Non-Face-to-Face per Minute Costs – In the analysis presented in December, we assumed that on a per minute basis we would not expect variation in variable nurse and telecomm costs. We therefore pooled these costs for the three diseases programs and calculated a $1.86 base cost per minute. In addition, for each disease we added a disease specific cost per minute based on the average fixed/support per minute costs. In the case of COPD the results are shown in Exhibit 3 and produce a total COPD program cost of $4.53 per minute ($1.86 base cost and $2.67 disease specific costs). This adjustment increased the total COPD costs by about $2,800.

- Face-to-Face per Minute Costs – The face-to-face per minute costs were calculated by dividing the projected face-to-face nurse costs by the projected total face-to-face contact minutes.

4) We do not know the extent to which prevalence rates will vary for COPD. McKesson assumed a 2.05% prevalence rate in the contract, but found a prevalence rate of 1.71% in the data sources reviewed to create projections for Milliman. Based on this initial range, we have assumed that the prevalence rate will range from 1.5% to 2.25% of the eligible population.

5) Adjustments were made to the McKesson data, as some of the data was based on the early months of the program when utilization rates were lower than expected for a fully functioning program. This was equivalent to the application of completion factors to account for the low enrollment levels in early months. As stated above the data

McKesson used to project COPD costs was based on actual diabetes experience. We therefore used the completion factor developed for diabetes to adjust projected COPD claims

6) The aggregate number of services was adjusted to be appropriate for the population implied by our high and low prevalence assumptions.

7) The cost per service was reduced on the low end of the rate range. As the vendor expands its business, they expect material savings in unit costs resulting from economies of scale.

8) Services that apply to the entire eligible population (e.g., symptomatic letters which encourage members to call the nurse line) were not included in this analysis as it is assumed these services are already performed as part of the existing contract.

9) We trended the final rates at 2% annually to a center date of November 1, 2004. The contract period runs from March 1, 2004 to June 30, 2005. This rate is based on historical CPI. Due to the fact that the type and intensity of services performed by McKesson differ from those typically performed by a managed care organization, who face greater inflationary pressure, we felt the CPI would best reflect an appropriate trend rate.

10) We added a risk margin of 2% on the low end of the range and 9% on the high end. The 2% represents a typical lower end risk margin for capitated managed care plans for other Medicaid services. For the high estimate, we recognize that McKesson is accepting risk on claims as part of their guaranteed savings commitment (McKesson is at risk for the amount of their fees). However, they are paid a relatively low capitation rate, approximately 1/3 of a managed care capitation rate. We estimated a risk margin of 9% as a high-end estimate (3 times higher than a typical high-end risk margin of 3%).

Data Reliance and Projected Results

Some of our analysis of the soundness of disease management rates was based upon data and related information prepared by McKesson. In this regard, we relied on them as to the accuracy and completeness of the data. We evaluated the data used in our analysis for reasonableness and consistency.

Some of the results presented in this letter are estimates of future experience. Such projections are based on assumed values of modeling parameters. Actual experience is likely to differ from the projection.

Should you have questions regarding the information presented in this letter or its intended application, please do not hesitate to contact me at (206) 504-5603. I can also be reached by email at tim.barclay@milliman.com.

Sincerely,

Timothy S. Barclay, FSA, MAAA
Consulting Actuary

/kcp
Attachments